Second edition
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Dentistry — Refractory investment and die material

Médecine bucco-dentaire — Revêtements et matériaux pour modèles réfractaires

Reference number
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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 106 *Dentistry*, Subcommittee SC2, *Prosthodontic Materials.*

This second edition cancels and replaces the first edition (ISO 15912:2006), which has been technically revised. It also incorporates the Amendment ISO 15912-1:2006/Amd 1:2011.

In this edition, dental pressable-ceramic investment materials are included in the Scope for the first time. These products are intended for the production of ceramic crowns and inlays and, as such, the same requirements as those for an investment product intended for the production of metallic crowns and inlays by casting are relevant (Type 1, according to the classification in this standard).

The previous edition contained requirements and test methods that had been developed for discontinued composition specific standards. In recent years products have been introduced that have other chemistries (for the binder and the refractory phase), specifically to minimize chemical reaction between the mould and the molten casting metallic material. A number of technical changes have been made to enable all dental casting investment products, regardless of their composition, to seek compliance with this International Standard and maintains the agreed philosophy that this International Standard should be inclusive, application-driven and not be limited by composition considerations.

Where appropriate, aspects of the test procedures have been changed to follow the manufacturer's instructions for use. The requirement for thermal dimensional change now takes into account the cooling of some products (after burn-out) to a lower casting temperature. The specification for the dilatometer has been changed for it to be compatible with the heating — and where relevant, the cooling after burn-out — of the product to the casting temperature.

The procedure for determining the initial setting time has been revised to harmonize with that present in the latest edition of the standard for dental gypsum products, ISO 6873:2013.[1] Although substantially editorial, there are technical changes.

Information for use now requires a statement of the type of refractory phase(s) that is (are) present.

Labelling requirements for products that contain silica have been revised to comply with the current United Nations Globally Harmonized System for Classification and Labelling of Chemicals (UN GHS)[2] and recommendations for silica as a hazardous material.

Containers of liquid must be marked to indicate the use to which the liquid is put.

